

ABSTRACT OF THE DISCLOSURE

An automated library system having multiple storage cells for storing multiple data cartridges. Rails are provided adjacent to the storage cells to guide one or more robots among the storage cells. Primary coils are disposed proximate the rails. A power supply produces an alternating current in the primary coils. One or more magnetic cores are mounted on each robot. Each magnetic core is adjustable to form a normally gap-less closed magnetic path, and a gapped magnetic path when transitioning between primary coils. Alternating currents in the primary coils induce secondary alternating currents in secondary coils wound around the magnetic cores. The secondary alternating currents are controlled and converted into mechanical movement that include loading and unloading the data cartridges to and from the robots, and moving the data cartridges along the rails.

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